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Creation Social Science and Humanities QUARTERLY

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CREATION SOCIAL SCIENCE AND HUMANITIES SOCIETY

The Creation Social Science and Humanities Society (CSSHS) was incorporated in Wichita, Kansas, in 1977. The CSSHS is educational, and will promote and disseminate information on the implications of the Biblical creation model of origins for the social sciences and humanities, with emphasis on the development of these disciplines in accordance with the rapidly emerging and increasingly well established natural scientific models of Biblical creation.

The **Quarterly Journal** is directed toward teachers and students of the social sciences and humanities, especially in institutions of higher learning. The CSSHS may also publish books, monographs, and other writings, and sponsor speakers, seminars, and research projects related to its educational purpose.

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Cover Art: "Sermon on the Mount"

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EDITORIAL

Dear Readers:

Last year a Christian student attended the secular, state university where I teach. She was enrolled in one of my classes, and I got to know her fairly well. We enjoyed some good times of discussion, sharing, fellowship and prayer. She was determined to complete her undergraduate psychology requirements and move on into a graduate program in clinical psychology. Particularly she wanted to get into a private, Christian institution for her clinical training. Many of the ideas and concepts she was exposed to in our program created difficulties for her Christian faith, and on more than one occasion we talked through some of these troubling issues. She would formulate the best answer she could think of, and I would hear her out and give my suggestions as to what I saw as the best answers. Especially, of course, I emphasized the necessity of founding her reasoning on (1) the person of God and (2) his creation and sustaining of all things as revealed in the Scriptures. Of particular importance to students in the social sciences is the doctrine of man as created in the image of God, though fallen into sin and corruption. (Incidentally, I would say that this is one of the most urgent aspects of the Biblical creation movement. Students do not know how to defend the faith against false teachings and philosophies because they have not been taught to always go back to Genesis.)

At the end of the term the student completed her undergraduate studies and was accepted into an accredited Christian university with a clinical psychology graduate program. Several months after she had begun her doctoral studies I received a letter from her. She reported that she was happy with the program in many ways, but that she also felt she had lost something in going from the secular institution to the Christian university. As she put it to me in her letter, it was as though everything in her Christian program was systematized, settled and simply spoon-fed to the students. As she put it in her letter, "I felt more spiritually alive when I had to fight for every spiritual crumb."

At the time I received her letter this was very much a message I needed to hear. Oftentimes the secular campus is a wearisome and discouraging battlefield. I have often thought that it would be nice to leave it all behind and try to find a Christian college where I could teach in an atmosphere more conducive to my spiritual interests. But the fact is, as my Christian sister's letter brought to me anew, there is no place in this present world that is not a spiritual battlefield. The problems may be different, but the oppositions and pitfalls are everywhere. On the secular campus the problems are more often hostile unbelief and a lack of colleagues who are willing to share your spiritual interests. On the Bible-centered, Christian campus I imagine the problem is more often one of taking the profundities of the faith too much for granted even to the point of "losing one's first love." One thing I will say about my experience on the secular campus. There is no shortage of situations that spur me to cling moment-by-moment to Christ himself, and to appreciate how vital the New Covenant is.

I sometimes think, "How hard it is to be a Christian and a psychologist." But then I stop and reflect a bit and realize how hard it would be to be a minister and

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a Christian. In our walk with Christ the spiritual opposition is everywhere, but so is God's grace. "Endure to the end," our Lord said. "Occupy until I come." This is the season for such spiritual admonitions for those Biblical creationists such as myself who labor on the secular college campus.

Paul D. Ackerman

ANNOUNCEMENTS

Papal Declarations Relevant to Evolution and Biblical Creation

We recently received a correspondence from William J. Crofut of the Catholic Creation Ministries, 24 Griffin Street, Skaneateles, NY 13152. Contained in the correspondence were a number of Papal statements relevant to the modern creation-evolution controversy.

Papal denunciation of evolution as the foundation for "modernism" or what we would today call "secular humanism" occurred early in the twentieth century. The dangers of modernism were recognized and condemned as

> . . . the synthesis of all heresies (Pope St. Pius X, 1907, no. 39).

Those who subscribe to the modernist philosophy were further taken to task:

> . . . Modernists . . . lay down the general principle, that in a living religion everything is subject to change, and must in fact be changed. In this way they pass to what is practically their principal doctrine, namely, evolution. To the laws of evolution everything is subject under penalty of death — dogma, Church, worship, the Books we revere as sacred, even faith itself (Pope St. Pius X, no. 26).

Evolution's likeness to Communism was spelled out by Pope Pius XII in 1950:

> Evolutionary speculations are eagerly welcomed by the Communists, who find in them a powerful weapon for defending and popularizing their system of dialectical materialism; the whole idea of God is thus to be eradicated from men's minds (Pope Pius XII, 1950, no. 5).

Evolution's vital undergirding of modern liberal scholarship in the social sciences was pointed out by Pope John Paul II in 1980:

> An "adequate" anthropology rests on essentially "human" experience, opposed to the reductionism of the "naturalistic" type, which often goes hand in hand with the evolutionistic theory about the beginnings of man (Pope John Paul II, 1980).

This quote was taken from one of Pope John Paul II's teachings during a weekly general audience. The Pontiff has been teaching specifically on the theology of man since late 1979 during his regular Wednesday talks. Anyone who has followed these talks, each of which has been reprinted in *The Wanderer,* would have to admit that John Paul II does not support human evolution.

Quite explicitly supportive of the historicity of the Genesis account of creation is this Papal declaration of Pope Pius XII:

> Christians cannot lend their support to a theory which involves the existence, after Adam's time, of some earthly race of men, truly so called, who were not descended ultimately from him, or else supposes that Adam was the name given to some group of our primordial ancestors. It does not appear how such views can be reconciled with the doctrine of original sin, as this is guaranteed to us by Scripture and tradition, and proposed to us by the Church. Original sin is the result of a sin committed, in actual historical fact, by an individual man named Adam, and it is a quality native to all of us, only because it has been handed down by descent from him (Pope Piux XII, no. 37).

General acknowledgment of Scriptural inerrancy is found in these final two Papal declarations:

> . . . it is absolutely wrong and forbidden either to narrow inspiration to certain parts only of Holy Scripture or to admit that the sacred writer has erred (Pope Leo XIII, 1893, IID3).
>
> The Books of the Old and New Testament, whole and entire, with all their parts, as enumerated in the decree of the same council (Trent) and in the ancient Latin Vulgate, are to be received as sacred and canonical. And the Church holds them as sacred and canonical not because having been composed by human industry, they were afterwards approved by her authority; not only because they contain revelation without errors, but because having been written under the inspiration of the Holy Spirit, they have God for their Author (Pope Leo XIII, IID3a).

REFERENCES

Pope John Paul II. 1980. Creation as fundamental and original gift. *The Wanderer* 113 (3):9.

Pope Leo XIII. 1893. Encyclical Providentissimus Deus (On the study of Sacred Scripture).

Pope Pius XII. 1950. Encyclical Humani generis (False Trends in modern teaching).

Pope St. Pius X. 1907. Encyclical Pascendi dominici gregis (On the doctrines of the modernists).

Publications Review

We have received a complimentary copy of *The World & I* (Vol. 2, No. 3, March 1987). This is a truly remarkable publication. It is lavish, very thick (700 pp.), beautifully illustrated and contains well-researched information of interest in most general areas of human action. There is a particularly good department named "Currents in Modern Thought." The issue we received featured an outstanding overview of intellectual trends in prerevolutionary Russia written by authoritative scholars. The journal is of moderate conservative orientation.

A number of articles in this issue spoke to Christian believers, for example, "Coexisting with Islam" on the history and present situation of the Coptic Orthodox Church in Egypt. Because the news media generally reflect only left-liberal doctrinaire views about South Africa, the thoughtful article by Mangosuthu G. Buthelezi, chief minister of KwaZulu, president of Inkatha, the largest black political organization in South African history (we only seem to hear of the communist-leaning ANC of Nelson and Winnie Mandela!), and chairman of the South African Black Alliance, was indispensable reading for anyone wanting a balanced view and renewal of hope about South Africa.

There is no publication at this time which offers the incredible wealth of world-wide information contained in *The World & I* on a monthly basis from a thoroughly and expressly Christian biblical perspective. However, *The World & I* impresses us as "The next best thing." The steep subscription price, $90 a year, seems forbidding until one reflects upon the encyclopaedic range of the subjects covered, and the depth of permanent research. This journal could well serve as the chief resource for current events teaching for Christian colleges, schools, teacher training, and, of course, individual scholars who could pool their finances and share it. To subscribe, write *The World & I*, 2850 New York Ave., N.E., Washington, D.C. 20077-0760.

LETTER TO EDITOR

Dear Editor:

I heard about your ministry through the Institute for Creation Research. I am a student in the Geology department of the University of Montreal. As you may have heard, the Lord is doing a great work of redemption here among the french speaking people of Canada. This tremendous growth in number and maturity includes an increasing need for the teaching of biblical creationism in the Church as well as a need for information about scientific creationism on the campuses. We are two Bible believing Christians at Université de Montréal's Geology Department and our great God allowed us the privilege of having a sound impact for Him on our fellow students through creationism. However, this unexpected impact is forcing us to reinforce our position as Bible believing creationist Christians and we are sure you can be of great help to us in doing so. This is why I'm asking you to please send information about your ministry to the two following addresses:

Raymond Guérard
10401 St-Urbain St.
Montreal, QC, Canada
H3L-2T8

Robert Lavigne
8927 Parent
LaSalle, QC, Canada
H3R-3Y7

Waiting patiently in the peace and love of our great Creator and savior.
Thank you!

Thomas Molnar: A Christian Scholar For Our Time

Ellen Myers

Part I: From Gnosticism to Sartre

Not every Christian will agree with all premises of the philosophy of St. Thomas Aquinas. Nevertheless Thomistic scholars have valiantly struggled against the overwhelmingly anti-Christian, nihilist thought of our time and pointed to its roots in the past. Thomas Molnar stands in this tradition, and much can be learned from his many excellent writings.

Molnar, born 1921 in Budapest, Hungary, is Professor of French and world literature at Brooklyn College. He is a world traveler and has written articles and books on an astonishingly wide range of subjects, including education, ancient and modern philosophy, American and European politics, socialism, the modern ecumenical movement, and religion versus atheism. Book titles include *Ecumenism or New Reformation?; The Future of Education; The Decline of the Intellectual; Africa, a Political Travelogue; Le Socialisme sans visage* (Socialism Without a Face) and *L'Animal politique* (The Political Animal), published in France; and *Authority and Its Enemies,* published at the height of the revolutionary, anarchistic turmoil among Western young people in the 1960s. Of particular importance for students wishing to understand the course and meaning of Western intellectual and religious history are Molnar's *Sartre: Ideologue of Our Time; Utopia, The Perennial Heresy; God and the Knowledge of Reality;* and *Theists and Atheists: A Typology of Non-Belief.* These four books, as well as Molnar's important article "The Gnostic Tradition and Renaissance Occultism," published in the *Journal of Christian Reconstruction* (I:2, Winter 1974, pp. 112-119) will be reviewed and discussed on the following pages.

1. "The Gnostic Tradition and Renaissance Occultism"

This very helpful article traces anti-Christian thought patterns during the first three centuries of the Christian era and in the Renaissance. Molnar shows that "the Hebrew-Christian concept of separating God and man as Creator and created, of not confusing their natures, their persons, their powers" stands apart from "practically all other religious and para-religious doctrines and systems [which] identify God and self." Molnar believes that "Christianity is hard to bear" because it requires of man "insertion in the hierarchy of creation, acceptance of a role assigned by the Creator above the rest of other creatures, yet definitively and distinctly not divine." Here Molnar rightly shows that *biblical creation ex nihilo* is the root and ground of Christianity, as well as of the enmity of almost all other religions and thought systems. To anticipate, this is the burden of his books *God and The Knowledge of Reality* and *Theists and Atheists,* as well as of the ground-breaking *Utopia, The Perennial Heresy.* What non-believers really desire and attempt to bring about is the overthrow of the reality created by the God of Christianity, and to become divine creators of a different reality of their own making.

Molnar goes on to show the fundamental monism (disbelief in the transcendent Creator of Scripture) underlying ancient gnosticism and occultism of the first three centuries A.D., which revived in the Renaissance and is threatening "to prevail once more in our time." (We see this revival in the so-called "New Age" movement of today, which is not "new" at all.) Molnar rightly emphasizes the important part played by *techniques* used by the ancients (as well as modern "New Agers"[1]) either to escape from this present world into an "inner world" of one's own, or else to master it through attempted fusion or self-identification with God, that is, the pantheist "One." He presents the principal concepts of gnostic-occult thought recurring through history to this day. They are (1) the doctrine of correspondences in the monistic universe, expressed in the occult motto "As above, so below," which allows the magician to change the substance of the world/reality; (2) the notion of the "coincidence of opposites" (*coincidentia oppositorum*) within the one great Whole of a pantheist cosmos; (3) closely related to (2), the notion of original man as the "androgyne" in whom male and female are fused; (4) the search for a "philosopher's stone" which would fuse opposites and even produce a "new man"; (5) the symbol of the Sphere, denoting the fused totality of all things (restoration of the original undifferentiated Whole or One) as well as Nothingness. Note that the One and the Nothing are seen as ultimately the same, just as in Zen Buddhism and Chinese Taoism (and inferred in all Eastern monistic thought). To these ideas the Renaissance added "the concept of the community itself as a 'talisman,' a kind of philosopher's stone on a large scale, the *city* regarded as the Original Man of vast proportions." Humanist utopians have perennially written about their ideal "city" as "the final symbol for man's divinization" and representing a "new" mankind unified in a new, man-made paradise replacing present (created) reality.

2. Sartre: Ideologue of Our Time

Molnar's study of the French atheist-existentialist philosopher and communist centers upon Sartre's hatred of the "bourgeoisie." For Sartre this is not only the loathed traditional middle class (from which he himself sprang), but anyone not exercising absolute and unbounded freedom to do as he pleases. In Sartre's new world there are no moral norms; the very concepts of "good" and "evil" would disappear. In his bulky book *Saint Genet,* dedicated to a thief-pederast, Sartre declared that in a society freed from its "bourgeois" anti-freedom neurosis sodomy and theft would be as normal as any other acts. However, he also stated in his *Existentialism Is A Humanism* that "even the creation of a climate of tolerance around an individual or a group would be a violation of their freedom: We would thereby neutralize their free exercise of courage and resistance."[2] This means that Sartrean absolute freedom is impossible to obtain in *any* society. What Sartre really wants is the *abolition* of society; as he puts it in his well-known words from his play *No Exit:* "Hell is other people."

Molnar believes that this rejection of actual reality confronting the self with the not-self or "other" is at the root of all philosophies which see in the "otherness" of reality outside the self "ultimate obstacles to true understanding. They believe that true knowledge could only be attained through the complete merger of subject and object . . . " This notion was "manifested in medieval nominalism, later in idealism, and again in contemporary phenomenology."[3]

How can philosophy find a way to overcome the distinction and separation between the self and the world, the subject and the object of knowledge? The phenomenologist Edmund Husserl, whose explanation of how this could be achieved was adopted by Sartre, actually reiterated "the Kantian position which views man's consciousness as the final organizing principle of outer reality."[4] As Sartre then put it in an acticle, "La Transcendance de l'Ego," "The 'I' exists by the same token as the outside world, it exists relatively, that is as an object of consciousness."[5] Kant, Husserl and Sartre explained the apparent "otherness" of the world relative to man in an atheistic, rationalistic and phenomenological manner. On the other hand, Hegel expressed the same fundamental premise of a monistic universe in which all is essentially and ultimately one in pantheistic terms. He wrote "in the early *Theologische Jugendschriften* . . . that the divine is the point at which subject and object are no longer separable . . . Happiness . . is . . . our unity with the world, the act of finding oneself in the being."[6]

A perhaps unexpected but inevitable result follows from any monistic world view (atheist or pantheist) denying the transcendent, personal God of the Bible, the Creator *ex nihilo* and ontologically "Other" who established creaturely distinction (such as the fixed kinds of Genesis 1) among all things. If the world and all things are considered ontologically One, then it is equally possible to say that man's "I" is absorbed in the universal "One," or that the "One" is absorbed in the "I." Within the monistic atheist-pantheist world view all opposites such as idealism and materialism, pantheism and atheism, rationalism and irrationalism, the self and the "other" coincide. Molnar shows by Sartre's example that "knowing" and "being" also coincide:

> Man may reach the state of perfect knower, if, in order to coincide with the outside world, he allows his consciousness to dissolve and become part of the world. This is, in essence, the phenomenological line of thought that Sartre, too, adopts . . . on the other hand, he believes with Hegel that to *think* an object means to interiorize it in consciousness which thus defines the outside world.[7]

Moreover, if the world is essentially "One," and if it exists only as the object of man's consciousness which, just as Kant said, is "the final organizing principle of outer reality," then, as Molnar states, "the reconstructed world (which, for the immanentist [monist] philosopher, is all that being is) will have conditions for the perfect knowledge." For the traditional "realist" philosopher a distinction exists between that which actually is ("being") and that which man knows about it ("knowledge"), and for him "being is more than what knowledge can ever embrace."[8] The traditional philosopher wanted to understand the world around him often apart from the Creator God of Scripture, it is true, but at least still in principle submissive to existing reality. The modern philosopher wants perfect, total knowledge of a world he himself creates by his own mind and will so he may transform and rule it; in biblical language, he wants to be God. Alternately, and this is Molnar's belief (he significantly calls Sartre an "ideologue" rather than a philosopher), the modern philosopher is not a philosopher in the traditional sense at all. Marx summed it up neatly in his celebrated dictum, "Philosophers have explained the world; it is necessary to change the world." This attitude explains why Sartre, ostensibly a champion of total individualist-anarchist freedom, became a rabid defender of communist-Soviet tyranny in its efforts to change the world.

Sartre understood that the most important step in establishing a new, reconstructed world is the fusion of all individual "I's" within one all-embracing whole, global and cosmic coalescing mankind. This is why he

> locked himself up in the Hegelian-Marxist conceptual world . . . Hegel defined the free community of the future as an intersubjectivity in which each may be as sure of all others as of himself. This state will be reached when the world becomes purely the product of men. Human existence will then be based on complete community and reciprocity; consciousness will not have to search beyond man, in the direction of God, but will be totally engaged in the terrestrial enterprise. Sartre could subscribe to every one of these statements; what interests an immanentist of his kind in the Marxian completion of Hegel is the thesis that the objective so outlined . . . is identified not with some nebulous operation of the World Spirit as Hegel taught, but with work, collective ownership, and centrally directed collective production, distribution, and consumption.[9]

Molnar proves through Sartre that thought systems ostensibly at odds, namely, Kantian rationalism, Hegelian pantheist idealism, Marxist materialism, and modern phenomenalism-existentialism, share the common ground motive of monism. This presupposition entails the denial of the transcendent, personal, sovereign Creator God of the Bible, and hence of created, fixed, diversified reality. All these thought systems explicitly or implicitly envision a new world, a new age, and a new, coalesced mankind made and ruled by man, the new God.

It is instructive to compare Molnar's "The Gnostic Tradition and Renaissance Occultism" and *Sartre: Ideologue of Our Time*, and to see the many premises shared by both world views. These common premises include (1) monism, consisting in denial of the separation between God and world as Creator and created, and identification of self or world with God; (2) emphasis upon "techniques" to be absorbed in or master the world; today's techniques not only revive ancient magic, psychological consciousness "expansion" (really emptying one's mind from rational thought) and drugs, but also include "scientific" conditioning, outright brainwashing, and police state coercion; (3) the Renaissance idea, vastly expanded, of the community, the global *city*, where Sartre's desire for the abolition of society as we know it would be fulfilled, for all differentiation between individual people would be erased in the total and totalitarian "equality" of the new, fused mankind.[10] No truly "others" would exist.

FOOTNOTES

[1] For a list of such "techniques," see Marilyn Ferguson, *The Aquarian Conspiracy* (Los Angeles: J.P. Tarcher, 1980), pp.86-87.

[2] Thomas Molnar, *Sartre: Ideologue of Our Time* (New York: Funk & Wagnalls, 1968), p. 51.

[3] Ibid., p. 41.

[4] Ibid., p. 53.

[5] Ibid., p. 50 and n. 19, p. 58.

(continued on page 24)

The Judeo-Christian Cosmology and the Origins of Science

Paul Gosselin

If we refer to the history of science, modern science originated in Europe in a context (the 16th and 17th centuries) where Christianity was the dominant world-view, permeating all aspects of life.[1] Not only was the proverbial antagonism between 'science' and religion non-existent,[2] but during this period scientific research itself was conceived (by *scientists*) as a *religious* task, a means of understanding the wisdom of God manifest in creation and as a way to worship Him. Discussing this attitude among the Puritans, R.K. Merton remarks.

> This is the very motif that recurs in constant measure in the very writings which often contained considerable scientific contributions: these worldly activities and scientific achievements manifest the Glory of God and enhance the Good of Man. The juxtaposition of the spiritual and the material is characteristic and significant. This culture rested securely on a substratum of utilitarian norms which identified the useful and the pure. Puritanism itself had imputed a threefold utility to science. Natural philosophy was instrumental first, in establishing practical proofs of the scientist's state of grace, second in enlarging control of nature; and third, in glorifying God. Science was listed in the service of individual, society and deity. That these were adequate grounds could not be denied. They comprised not merely a claim to legitimacy, they afforded incentives which cannot be readily overestimated. One need only to look through the personal correspondence of seventeenth century scientists to realize this.[3]

This attitude towards science was not, however, particular to Protestantism but was common (with a few variations) among other scientists and mathematicians of the time such as Galileo, Descartes and Father Mersenne. Merton points out that many renowned seventeenth century scientists and mathematicians were also members of the clergy. Merton also notes that lay scientists such as Boyle, Nehemiah Grew and Isaac Newton all had a keen interest in matters religious.

Taking these facts into consideration, one must not be surprised then at science's present ideologically incomplete state, because at its birth science was thoroughly integrated in the period's dominant religious system: Christianity. There are good reasons to believe that during this period science operated as a sub-cosmology,[4] that is, a sub-cosmology specifically oriented towards the systematic study of the physical world and equipped with a basic methodological technology. In this context Christianity provided the 'remainder' of meaning, a larger, overarching cosmology, which is required by people of all times. The 'remainder' of meaning provided by Christianity would include, among other things, insights into areas of morality, sexuality, general cosmology, eschatology, etc.

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Setting these considerations aside for a moment, it must be pointed out that the awakening to the fact of science's metaphysical or cosmological aspects has had repercussions far beyond the field of the philosophy of science. This new awareness of science's metaphysical aspects has had an important impact on the debate on rationality presently taking place in Anglo-Saxon anthropology, where, among other things, a fair amount of attention has been paid to the following question: "Does the distinction between scientific and non- (or pre-) scientific thought have any basis? Is it meaningful?" As we will see later, the various views taken with regard to the origins of science play an important role in the formation of attitudes and determining positions adopted in the debate on rationality, specifically on the question of accepting or rejecting the distinction between scientific and non-scientific thought.

Due to the debt owed by a number of prominent participants in the debate on rationality to the works of Karl R Popper, we will briefly discuss his contribution. In an article entitled *Back to the Presocratics*[6] (pp.136-165) Popper has postulated, as have most philosophers and historians of science, that the West owes its scientific heritage to the philosophers of ancient Greece. According to Popper, the Greeks' greatest contribution was that of establishing a *tradition of critical discussions* which made possible the review of contemporary religious beliefs and opened up opportunities for innovation in matters cosmological.[7]

In a fascinating article by Robin Horton[8] we find one of the first discussions bearing on the parallels and discontinuities between scientific and non-scientific thought (specifically, African traditional thought). Horton underlines the fact that African cosmologies propose (or presuppose), quite in the same manner as modern scientific theories, a certain number of beliefs with which it is possible to explore and classify the world around us and also that *both* systems rely on the use of metaphors. Horton is of the opinion that the difference between scientific and non-scientific thought is due to social circumstances, what he calls 'open' and 'closed' predicaments (concepts borrowed from Popper) Horton remarks that societies characterized (at least to some extent) by scientific thought involve an 'open' situation, that is, the population in general is aware of *more than one* cosmology or world-view. Traditional (or 'closed') societies involve situations where there is no developed awareness of cosmological alternatives and are usually characterized by *one* cosmology or world-view. Horton believes that the presence of cosmological alternatives is a crucial factor for the birth of science permitting, in the long run, the development of critical attitudes towards current (religious) conceptions. In a 'closed' situation people will tend to accept the dominant world-view simply because there are no alternative world-views available with which they could develop a critique The scientist, however, is capable of going beyond common sense perceptions due to the fact that he has access to more than one cosmology.

A number of critiques have been leveled at Horton's approach to the origins of science and the science/non-science distinction. Ernst Gellner (1973), for example, remarks that the 'poor savage' living in a monolithic society with *no access* to alternate cosmologies, that is without contact with other societies having different cosmologies, is practically non-existent. Furthermore, access to cosmological alternatives will not automatically result in the development of a western form of science. Gellner notes[9] that many traditional societies transcend their common conceptions of the world simply by the syncretistic addition of beliefs from other cosmologies. *Nothing is eliminated.* Thus, a situation where cosmological pluralism is an established fact cannot, then, be held to be 'modern' or 'scientific' and will not necessarily bring about the development of a critical tradition as required by Popper and Horton. Looking at another point, Paul K. Feyerabend expresses doubts about the 'essential scepticism' that Horton holds to be characteristic of science. The average scientist, as far as Feyerabend is concerned,[10] has a much more 'closed' attitude than is commonly believed. Quite like the 'primitive,' the average scientist keeps scepticism to a minimum as .

> . . . it is directed against the view of the opposition and against minor ramifications of one's own ideas, never against the basic ideas themselves. Attacking the basic beliefs evokes taboo reactions which are no weaker than are the taboo reaction in so-called primitive societies.[11]

Pursuing this further, the average over-specialized scientist, doing normal research (á la Kuhn), works within *one* single paradigm (often without any idea of alternate theories), yet we will all admit this still amounts to science!

In a recent essay, *The domestication of the savage mind,* Jack Goody has brought his attention to bear on problems initially discussed by Horton. Goody, agreeing with Gellner, notes that the presence of alternative cosmologies in a society is not a sufficient condition for the development of science, much less a constraining condition. Goody, as does Horton, holds to the critical tradition view of the origin of science, but taking into account the weaknesses of the cosmological pluralism hypothesis, Goody proposes the hypothesis that it is *the introduction of writing* which will be crucial for the *accumulation* of critical thoughts and alternative cosmologies. Writing, then, in Goody's view, provides the conditions necessary for the establishment of the critical tradition, which in its turn is a prerequisite for the birth of science. One might ask "Why pay so much attention to writing?" Goody answers:

> Because when an alternative is put in writing it can be inspected in much greater detail, in its parts as well as its whole, backwards as well as forwards, out of context as well as in its setting; in other words it can be subjected to quite a different type of scrutiny and critique than is possible with purely verbal communication. Speech is no longer tied to an 'occasion', it becomes timeless. Nor is it attached to a person, on paper, it becomes more abstract, more depersonalized.[12]

Goody understands, however, the difficulty of establishing a radical dichotomy between societies with or without writing, a *single* dichotomy supposedly accounting for the development of science,[13] but remains convinced that to a large extent western science owes its development to writing. Ironically, there are a number of ethnographic facts not only known to Goody but published by him which contradict the idea that writing constitutes a causal factor determining the development of science. In *Literacy in Traditional Societies,* Goody (pp.11-16) and others cite many cases of societies where writing exists, but where nothing resembling western science has developed. The Tibetan case[14] is particularly striking. There writing has been restricted to religious uses and printing often associated with the accumulations of spiritual merit.

As I understand it, then, writing inevitably constitutes *one* of the conditions necessary for the development of science, but, and in agreement with Kathleen Gough,[15] I must insist on the fact that a number of ethnographic facts contradict the idea that writing might be considered, by itself, a causal or constraining factor. I would then advise that if we are to attain a proper understanding of the development of science we must look elsewhere taking into account the inhibiting and stimulating effects that cosmological presuppositions can have on the comprehension and the exploration of the physical world around us.

In anthropology, to a large extent, there has been little interest in the origin of science and in the effects that cosmological presuppositions may have on its development. Nonetheless it must be pointed out that some authors have at least touched on the issue.

> The idea of natural order, a basic assumption of the scientific method, is probably essential to most religious interpretations of the nature of things, but it is weakened by the hypothesized existence of malicious spirits or deities capable of souring milk, ruining crops or sending pestilence for no particular reason whatsoever. Individuals who believe that they may at any time be objects of unprovoked and unavoidable misfortune almost certainly lack the confidence and security afforded to those who live in a safe world guarded by benevolent and predictable deities.[16]

Previously we have pointed out the intimate relationship existing between science (at the time of its birth) and Christianity. Might this simply be one among trivial details in the history of science or, rather, might it be evidence of a deeper relationship? Data now turning up from various directions indicate that the relationship is anything but trivial.

In an essay published initially in 1925 Alfred North Whitehead, an English mathematician, has made the following remarks on the origins of science:

> I do not think, however, that I have even yet brought out the greatest contribution of medievalism to the formation of the scientific movements. I mean the inexpugnable belief that every detailed occurrence can be correlated with its antecedents in a perfectly definite manner, exemplifying general principles Without this belief the incredible labours of scientists would be without hope. It is this instinctive conviction, vividly poised before the imagination, which is the motive power of research: that there is a secret which can be unveiled. How has this conviction been so vividly implanted on the European mind? When we compare this tone of thought in Europe with the attitude of other civilizations when left to themselves, there seems but one source for its origin. It must have come from the medieval insistence on the rationality of God, conceived as with the personal energy of Jehovah and the rationality of a Greek philosopher. Every detail was supervised and ordered: The search into nature could only result in the vindication of the faith in rationality. Remember that I am not talking about the explicit beliefs of a few individuals. What I mean is the impress made on the European mind arising from the unquestioned faith of centuries. By this I mean the instinctive tone of thought and not mere creed of words.
>
> In Asia, the conceptions of God were of a being who was either too arbitrary or too impersonal for such ideas to have much effect on the instinctive habits of mind. Any definite occurrence might be due to the fiat of an irrational despot, or might issue from some impersonal inscrutable origin of things. There was not the same confidence as in the

intelligible rationality of a personal being.[17]

Strange though it may seem, the 'deeper relationship' discussed earlier between the origins of science and Christianity is related to the borrowing of Judeo-Christian metaphysical components which, with time, came to serve as science's "hard core," its implicit ideo-logic to some extent. More specifically, these components constitute a set of beliefs now designated by the term scientific realism. As Leatherdale points out here, realism is related to a number of metaphysical components central to Judeo-Christian cosmology.

> A belief in the certainty of science was no doubt supported by the belief in a God-ordered universe. We see this is Descartes' belief that God would be no deceiver, in relation to empirical knowledge, and the belief of Newton, for example, and indeed the whole Deistic bias of Enlightenment thought, in a God-designed orderly universe capable of being understood by man's reason. It was to knowledge of a God-given and therefore real existent order of real things that man's reason was to win through. The order of things could be known with certainty, and reason leads to certainty, and therefore the literally true. This conviction is only slightly eroded by the advent of hypotheticalism, and, in some quarters, an awareness of the analogical or metaphorical nature of the new philosophy.[18]

Pierre Thuiller too points out that Newton's scientific works were based on Judeo-Christian presuppositions.[19] Discussing the works of Galileo, Stanley Jaki underscores the fact that, historically, the explicit postulation of certain Judeo-Christian presuppositions made the development of scientific realism possible:

> Nature, here, stood for God, not of course in a naturalistic sense, but in the sense made possible by the belief that nature was the work and faithful symbol of a most reasonable Supreme Being. Therefore nature, in analogy to her Maker, could only be steady and permeated by the same law and reason everywhere. From the permanence and universality of the world order it followed, for instance, that the same laws of motion were postulated for the earth and the celestial bodies (against Aristotelian metaphysics — P.G.). It also followed that regularly occurring phenomena, such as the tides, baffling as they might appear, should not be assigned a miraculous cause. The most important consequence of the permanence and universality of the world order anchored in the Christian notion of the Creator was the ability of the human mind to investigate that order. Such was an inevitable consequence that if both nature and the human mind were products of one and the same Creator. As to the human mind Galileo most emphatically stated that it was a "work of God's and one of the most excellent." The rapid survey of man's various intellectual achievements, which closed the First Day, served indeed for Galileo as proof of precisely such a theologically oriented conclusion.[20]

A historian by the name of Lynn White, better known perhaps for his research incriminating the Christian world-view regarding environmental issues, points out certain aspects of Judeo-Christian cosmology that had a positive effect on the rapid development of technology in the West.

> In 1956 Robert Forbes of Leyden and Samuel Sambursky of Jerusalem simultaneously pointed out that Christianity, by destroying classical

> animism, brought about a basic change in the attitude towards natural objects and opened up the way for their unabashed use for human ends. Saints, angels and demons were very real to the Christian, but the *genius loci*, the spirit inherent in a place or object, was no longer present to be placated if disturbed."[21]

Another scholar bringing somewhat unexpected support to the idea of a causal relationship between Judeo-Christian cosmology and scientific realism is Joseph Needham, who as a marxist historian has spent many years studying the development of Chinese civilization and technology (ancient and contemporary). Needham, who for the most part considers that environmental and socio-economic factors have played a predominant role in the *non*-development of a theoretical science in China, seems to have been forced by simple facts out of the (marxist) orthodox theoretical framework to pay attention to the effects that certain metaphysical presuppositions may have had on the birth of science. He notes.

> My colleagues and I have engaged in a rather thorough investigation of the concepts of laws of Nature in East Asia and Western culture. In Western civilization the ideas of natural law in the juristic sense and of the laws of Nature in the sense of the natural sciences can easily be shown to go back to a common root. Without doubt one of the oldest notions of Western civilization was that just as early imperial law-givers enacted codes of positive law to be obeyed by men, so also the celestial and supreme rational Creator Deity had laid down a series of laws which must be obeyed by minerals, crystals, plants, animals and the stars in their courses. There can be little doubt that this idea was intimately bound up with the development of modern science at the Renaissance in the West. If it was absent elsewhere, could that not have been one of the reasons why modern science arose only in Europe; in other words, were medievally conceived laws of Nature in their naive form necessary for the birth of science?[22]

Needham, in the following discussion on the God concept in Chinese cosmology, exposes at least one obstacle to the development of scientific realism among the Chinese·

> But in any case three things are clear: (a) that the highest spiritual being known and worshipped in ancient China was not a Creator in the sense of the Hebrews and the Greeks; (b) that the idea of the supreme god as a person in ancient Chinese thought, however far it went, did not include the conception of a divine celestial law-giver imposing ordinances on non-human Nature; (c) that the concept of the supreme being very early became impersonal. It was not that there was no order in Nature for the Chinese, but rather that it was not an order ordained by a rational personal being, and hence there was no guarantee that other rational personal beings would be able to spell out in their own earthly languages the pre-existing divine code of laws which had been previously formulated. There was no confidence that the code of Nature's laws could be unveiled and read, because there was no assurance that a divine being, even more rational than ourselves, had ever formulated such a code capable of being read. One feels indeed, that the Taoists, for example, would have scorned such an idea as being too naive to be

> adequate to the subtlety and complexity of the universe as they intuited it.[23]

One cannot hope, for obvious reasons, to produce in one short article all the proofs necessary to establish irrefutably the hypothesis of the Judeo-Christian origin of scientific realism, but I believe the evidence cited above demonstrates at least that such an explanation is plausible and should be taken seriously. The best research touching on this subject that I have come across so far is a volume by Stanley L. Jaki: *Creation and Science* (1974). In this essay, the author explores a number of major ancient civilizations among which we find the Greeks, the Egyptians, the Babylonians, the Indians, the Chinese and the three major civilizations of the New World (plus a look at modern Western science) assessing the various effects that their respective cosmologies had on the development (or *non*-development) of science in these societies. Jaki observes that only in the West, where the concept of a *transcendent* (that is not limited to the physical world) and omniscient creator God had become an essential and central component of the cultural ideo-logic, that a theoretical *and* experimental science did appear:

> The scientific quest found fertile soil only when this faith in a personal, rational Creator had truly permeated a whole culture, beginning with the centuries of the High Middle Ages. It was that faith which provided, in sufficient measure, confidence in the rationality of the universe, trust in progress, and appreciation of the quantitative method, all indispensable ingredients of the scientific quest.[24]

Seeing it would be inappropriate here to bury the reader under a flood of quotations from the works of Jaki, I can only suggest that the curious or the sceptics interested by the issues surrounding the origins of science take a look for themselves. The amount of historical research that has gone into Jaki's essays is rather astounding.

I am of the opinion that the fundamental issue taken up by Jaki touches on a crucial (and 'sticky') point; are the various ideologico-religious systems of the world of indifferent epistemological value or are some better suited as a basis for the development of an empirical science? Though it may be conceded that a large variety of ideologico-religious systems can give rise to reasonably harmonious societies (as far as is possible in this fallen world), but the data presented above indicate that they cannot all serve as a basis for a vigorous science. Feyerabend complains that we in the West are too quick to proclaim the superiority of our science, that we should let many traditions (or cosmologies) develop side by side in order to see if some other tradition might not do 'much better.'[25] 'Unfortunately' the experiment that Feyerabend demands has, in historical and anthropological terms, already taken place. Of the numerous ideologico-religious systems of the world that have had, in some cases, thousands of years to develop, only one has given birth to a theoretical *and* experimental science capable of a prolonged autonomous development.

The preceding data cast some doubt on the 'standard' version of the origin of Western science, presupposed by most historians of science, attributing the origin of this institution to certain components of Greek natural philosophy. It must be pointed out, moreover, that a number of historical facts contradict the 'standard' view. Jaki notes that the 'standard' version of the origin of science generally fails to underline the fact that the Greeks themselves only took their science to a certain point, from whence it then went into stagnation and decline[26] and that the Greeks never paid much attention to experimentation. The 'experimental tendency' was born and was popularized only in 17th century Europe. Jaki remarks that outside of the West, for example in the Byzantine Empire, in India, among the medieval Arabs and the Chinese,[27] the arrival of Greek science did *not* provoke the birth of an independent social institution whose accomplishments rapidly eclipsed those of the Greeks as was the case in 17th century Europe. It would seem quite clear then that the Greek origins hypothesis is a dead-end.

Curiously, if one does allow for the Judeo-Christian origins of our Western scientific cosmology, this casts new light on the fact that Popper has attributed scientific realism not to the Greek 'critical tradition' but to 'common sense.'[28] What Popper fails to emphasize is that the 'common sense' in question here is *Western* 'common sense,' a body of beliefs and presuppositions that has, over the centuries, become saturated with Judeo-Christian metaphysics. Outside the West the attitudes vis-a-vis the world (and the ideo-logics underlying them) were unable to sustain the confidence that we live in a rational and ordered world

It is quite possible that some will object to the preceding explanation of the origins of Western science in that it will be likely to give strength to Western prejudices about 'other' people's inferiority, encouraging paternalism, perhaps even racism. Who knows? Maybe it might. In any case narrowmindedness will always find fuel for fire. However, looking at this question a little open-mindedly, one may draw rather different conclusions. For example, thinking back to my first impressions of the works of J. Needham I remember being particularly impressed by the level of Chinese medieval technology, on many points *surpassing* that in Europe at that time. I was also struck by the contrast drawn by Needham between the semi-retarded,[29] barbarian and non-innovative Europeans (during the Middle Ages) and those ingenious medieval Chinese. The contrast is such that one is tempted to ask: Why is it that the ingenious Chinese did not invent science whereas 'those' . . . Europeans did (at least it was born there)?

It seems to me quite evident that such an event was *not* due to some intrinsic superiority of the Western 'races,' but rather to a happy 'coincidence' which made them heirs to a cosmology encouraging a confident attitude towards the rational exploration and study of the world. This cosmology, it must also be pointed out, was not native to Europe but had been imported from the Middle East.

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[1] Christianity during this period had successfully permeated most of its host cultures, but as regards Biblical standards of behavior the 'success' was most often only skin-deep. One has only to think of the wars between 'Christians' and the persecution of the Jews and other minorities to see this.

[2] In *Scepticism, Theology and the Scientific Revolution in the Seventeenth Century*. Richard Popkin provides evidence that this antagonism belongs more to positivist mythology than to real history (pp. 1-28 in *Problems in the*

Philosophy of Science. Lakatos and Musgrave (eds) North-Holland, Amsterdam 1968).

[3] Merton, Robert K. *The Sociology of Science.* U. of Chicago Press, Chicago 1973, p. 232.

[4] Popper, at least, would hardly be put off by such an affirmation. Some time ago he himself wrote:

> "I, however, believe that there is at least one philosophical problem in which all thinking men are interested. It is the problem of cosmology: the problem of understanding the world including ourselves, and our knowledge, as part of the world. All science is cosmology, I believe, and for me the interest of philosophy as well as science lies solely in the contributions which they have made to it." (p. 15).

In Popper, Karl R. *The Logic of Scientific Discovery.* U. of Toronto Press, Toronto 1959.

[5] See Popper, Karl R *Objective Knowledge* Clarendon Press, London 1973, p. 40, Gilkey, Langdon *Religion and the Scientific Future.* Harper and Row, New York 1970, p. 53-54, and Bunge, Mario *Les Prèsupposès et les Produits mètaphysiques de la science et de la technologie contemporaine.* pp. 193-206 in *Science et Mètaphysique* Dockx, Settle, et al Ed Beauchesne, Paris 1976

[6] In Popper, Karl R. *Conjectures and Refutations.* Routledge and Kegal Paul, London 1965, pp. 148-151

[7] Ibid, pp.148-151

[8] Horton, Robin *African Traditional Thought and Western Science.* in Africa. Vol. 27 no. 1, pp.50-77, 1967, Vol 37 no. 2, pp. 155-187, 1967.

[9] See Gellner, Ernst *The Savage and Modern Mind,* pp.162-181 in Horton and Finnegan (eds.), 1973, (pp.166-167).

[10] Feyerabend, Paul K. *Against Method.* Verso, London 1975/79 (see pp.294-300).

[11] Ibid., p.298.

[12] Goody, Jack *The Domestication of the Savage Mind.* Cambridge U. Press, London 1977, p.44.

[13] Ibid., pp.50-51.

[14] Goody, Jack (ed.) *Literacy in Traditional Societies. 1968 (see pp.15-16).*

[15] Gough remarks:

> My discussion of literacy in traditional Kerala thus tends to bear out conclusions reached from a general consideration of China and India. (. . .) Literacy is for the most part *an enabling* rather than a causal factor, making possible the development of complex political structures, syllogistic reasoning, scientific enquiry, linear conceptions of reality, scholarly specialization, artistic elaboration, and perhaps certain kinds of individualism and of alienation. (p. 153).

In Gough, Kathleen *Literacy in Kerala* 1968 pp.130-160 in Goody, J. op. cit. On this subject one might also consult an interesting article by Ruth Finnegan; *Literacy versus Non-Literacy: The Great Divide.* (in Horton, Robin and Finnegan, R. eds. *Modes of Thought* Faber and Faber, London 1973.

[16] Beals, Beals and Hoijer (eds.) *An Introduction to Anthropology.* 1977, p. 492.

[17] Quotes from Whitehead, Alfred N. *Science and the Modern World.* Free Press, New York 1967, pp. 12-13. Immediately after this sentence Whitehead weakens these affirmations by casting doubt on the idea that the logic of Judeo-Christian cosmology could justify such faith in a rational and ordered world. It is somewhat difficult to assess just what Whitehead means by this as his own pronouncements (in the quote) explain quite readily how the order in nature can be understood in relation to the rationality of the Creator . . . unless one refuses to accept the concept of a omniscient and omnipotent God as central to Judeo-Christian cosmology! I would tend to suspect that Whitehead's doubts on this point are largely concessions to the positivistic era in which he wrote. Incidentally Whitehead never pursued the point any further, at least in the essay under consideration

[18] Leatherdale, *The Role of Analogy, Model and Metaphor in Science.* North-Holland, Amsterdam 1974, p.231-232.

[19] Thuiller, Pierre *Jeux et enjeux de la science: Essai d'épistémologie critique.* 1972, pp 46-47.

[20] Quoted from Jaki, Stanley L. *Science and Creation.* Academic Press, New York 1974, p.278.

[21] White, Lynn *Medieval Religion and Technology.* U. of California Press, Berkeley 1978, p 237.

[22] Quoted from Jaki, Stanley L. *Science and Creation.* Academic Press, New York 1974, p.278.

[23] Ibid. p.237. Also see Jaki, Stanley L., op. cit., p.41.

[24] Jaki, Stanley L., op cit., p.VIII.

[25] Feyerabend, Paul K. *Science in a Free Society.* NLB, London 1978, p.106-107. It's hard to tell what Feyerabend means here by "do much better." Should we take this in speculative/theoretical, technological or moral terms? Feyerabend doesn't say.

[26] For more information on this question see Jaki *The Role of Faith in Physics.* in *Zygon* Vol. 2 no. 2, 1967, p 195, Jaki, op. cit., p.102-137, id. *The Road of Science and the Ways to God.* U. of Chicago Press, Chicago 1978, p.19-33, and Hooykaas, R. *Religion and the Rise of Modern Science.* Scottish Academic Press, Edinburgh 1972, p.29-30.

[27] See also Needham, op. cit., p.21.

[28] Popper, Karl R., op. cit., 1973, pp. 32-44

[29] At least this is the picture Needham draws. He really seems to enjoy telling stories about 'bright' medieval Europeans hauling into court of law roosters suspected of having laid eggs and other animals suspected of having broken the 'laws of nature' (see Needham, op. cit., pp. 328-330).

The New Physics Revelation: A Lesson Every Scientist Should Learn

Charles Cook

> No one can comprehend what goes on under the sun. Despite all his efforts to search it out, man cannot discover its meaning. Even if a wise man claims he knows, he cannot really comprehend it
>
> — Ecclesiastes 8.17

In the year that Galileo died, Isaac Newton (1642-1727) was born. Twenty-three years later Newton had developed his famous laws of motion These laws, the final attainment of a long scientific revolution, were to complete the overthrow of the Aristotelian ideas that had been Roman Catholic Church dogma for over 1000 years.

Newton's first law states. Every body continues in its state of rest, or of uniform motion in a straight line, unless it is compelled to change that state by forces impressed upon it.

The key word here is *continues:* A body *continues* to do whatever it happens to be doing unless it is acted upon by force. If it is at rest it *continues* in a state of rest. If it is moving it *continues* to move without turning or changing its speed

With this law as a beginning point, Newton went on to differentiate between the mass, weight and volume of an object. You can always compress a loaf of bread and change its volume, but the mass doesn't change — it contains the same amount of matter. Weight and mass are directly proportional to each other. That is, if the mass of an object is doubled, its weight is also doubled.

Newton then turned his attention to the application of a force on a moving body or a body at rest which led to a relationship of acceleration to force, expressed in his famous equation $F=MA$· Force equals Mass times Acceleration. This is Newton's second law and it gave the reason why bodies fall with equal acceleration, i.e. because of the gravitational force of attraction between the body and the earth, expressed in $F/M = g$.

Force always occurs in pairs. There is never, according to Newtonian physics, i.e. classical physics, only a single force in any situation. For example, a weightlifter pushes up on a barbell while the barbell pushes down on the weightlifter, which is described in Newton's third law.

To every action force there is an equal and opposite reaction force.

Newton's laws coupled with Darwin's evolution theory led the adherents of the world's second oldest religion — evolutionary humanism — to believe that if the exact positions and momenta of all the *particles* in the universe were known, one could invoke Newton's laws and, *in principle,* calculate the past and future course of *all* events.

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This notion led to the idea that all human actions are predetermined. Human beings, after all, are made up of tiny particles like everything else. If it was, in principle possible to predict the future course of these particles, it was equally possible in principle, to predict the course of a person composed of them.

Newton himself did not share the "Newtonian" world view. He believed that the natural laws he described so well were established and sustained by God. He would not have felt at home in what historians call the Newtonian Age with its mechanistic evolution dogma, either materialistic or theistic.

Mechanistic philosophy is the dogma that all of reality is governed solely by mechanical forces. It maintains that the world is like a huge machine and can be understood entirely in terms of laws of cause and effect. The entire universe is determined by the motion of its particles. As we have noted, one can, *in principle,* predict exactly the future behavior of any system by knowing its present state.

Mechanistic philosophy held sway over Western thought for a full three centuries. It was extended to all phenomena, including living things, human thought, and emotions. Coupled with Darwin's evolution surmise, it (along with the Graf-Wellhausen theory) led to the destructive biblical criticism of the nineteenth century and the falling away of American Protestantism to liberalism in the twentieth century.

If the universe is a machine, it was asserted, it is impossible for anything to occur which is not explainable by natural law. The laws of nature are inviolable; they permit no exceptions. "Natural laws, not the Bible, are immutable," it was said. Mankind was saying with the greatest scientific certainty: There is nothing miraculous in the world.

Liberal theology, always trusting in the utterance of scientists rather than trusting in the immutable Word of God, tagged along, placing its faith in classical physics, the basic premises of which are:

1. The physical world is real.
2. The physical world is orderly and rational
3. The physical world is understandable, and what we don't understand is due to our ignorance.

But the third basic premise goes contrary to the teaching of the Bible. There are some things about the world mankind will *always* be ignorant of, for the Bible declares:

> No one can comprehend what goes on under the sun. Despite all his efforts to search it out, man cannot discover its meaning. Even if a wise man claims he knows, he cannot really comprehend it. (Eccl. 8:17)
>
> The secret things belong to the Lord our God, but the things revealed belong to us and to our children forever, that we may follow all the words of the law. (Deuteronomy 29:29)

The "New Physics," the twentieth century physics, conclusively demonstrates the inerrancy of the Bible in regard to mankind's inability to fully understand the make-up of the physical world. While everyday technology achievements are made as man exercises his dominion over the fish of the sea and the birds of the air and over every living creature, filling the earth and subduing it (Genesis 1:26, 28), it turns out, just as the Scripture asserts, that there are limits beyond which man cannot go.

The new physics, known as twentieth century physics or quantum mechanics, is traceable to the work of one of its founding fathers, Niels Bohr, who discovered that energy must come in lumps, or quanta, and not in an unbroken wave. Bohr at the age of twenty-seven in 1913 was able to explain the energy release of a single electron in the hydrogen atom as it jumps from one of the outer orbits to one of the inner orbits. The structure of the atom was now as mathematical as Newton's universe. But it contained the additional principle of the quantum, of lumps, and not an unconnected line.

Allen Emerson gave a very simple explanation of the difference between classical physics and the new physics. He discussed an experiment conducted by Alain Aspect in 1982 at the University of Paris

Think of two billiard balls of equal size, A and B, rolling toward each other with the same speed but in opposite directions. They hit each other and fly apart with the same speed but in opposite directions. Shortly after they hit, reach out with your hand and stop ball A. What happens to B? Nothing. It will continue its merry way and roll to a sedate halt in due time

Quantum theory on the other hand would predict that ball B would have to stop the very instant we stopped A — without having touched B In short, if we stop A we automatically stop B, even though there is no physical connection between the two

Alain Aspect split two correlated particles of light and set them off in opposite directions. When one of the particles was affected by a polarizing filter, the other was correspondingly affected Whatever happened to one instantly happened to the other — remote control without any control mechanism. Recall our billiard balls flying apart. Aspect's experiment says that, *in the subatomic world,* if we stop one then the other stops instantly — without any physical connection. Again the Bible rings true:

> For my thoughts are not your thoughts, neither are your ways my ways, declares the Lord.
>
> As the heavens are higher than the earth, so are my ways higher than your ways and my thoughts than your thoughts (Isaiah 55:8-9)

We can still make predictions about what large *groups* of atoms will do. But these predictions are merely statistical — guesses as to what is most likely to happen.

So there you have it. man's limits, man's boundary beyond which he can proceed no further into the secret things of God: "statistical averages."

Werner Heisenberg noted in 1927 that the electron particle yields only limited information That is, you can specify where it is at this instant, but then you cannot impose on it a specific speed and direction at the setting-off. Or conversely, if you insist that you are going to fire it at a certain speed in a certain direction, then you cannot specify exactly what its starting point is — or, of course, its end point. Heisenberg called this the *Principle of Uncertainty,* which says, "no events, not even atomic events, can be described with certainty, that is, with zero tolerance."

Bronowski pointed out that the paradox of knowledge is not confined to the small, atomic scale; on the contrary, it is as cogent on the scale of man, and even the stars. When we compare the position of a star today with vastly improved astronomical instruments we are "astonished and chagrined" to find the observations as scattered within themselves as ever. He wrote:

> We had hoped that the human errors would disappear, and that we

> would ourselves have God's view. But it turns out that the errors cannot be taken out of the observations. And this is true of stars, or atoms, or just looking at somebody's picture, or hearing the report of somebody's speech. (*The Ascent of Man,* p. 358)

Bronowski went on to note that Karl Friedrich Gauss in 1795, when he was only eighteen years old, had solved the problem of the best estimate of a series of observations which have internal errors. He devised the Gaussian curve in which the scatter of errors is summarized by the spread of the famous bell curve. The scatter marks an area of uncertainty. We are not sure that the true position is in the center. All we can say is that it lies in the *area of uncertainty,* and the area is calculable from the observed scatter of the individual observations.

Getting back to the new physics, or quantum theory, the principles which formerly supported the mechanistic view are in a state of chaos. Statistical laws have always played a role in physics, such as in describing the behavior of gases. Nancy Pearcey notes:

> The assumption, however, was that statistical laws describing the behavior of large atoms *were derived from* laws governing individual occurrences. What is new in quantum mechanics is the suggestion that the statistical laws are ultimate — that individual occurrences are governed not by law but by chance. (*Bible-Science Newsletter,* January 1985).

Bertrand Russell asks in another context:

> But if the single atom is lawless, why should there be this regularity as regards large numbers? . . . The theory of probability is in a very unsatisfactory state, both logically and mathematically, and I do not believe that there is any alchemy by which it can produce regularity in large numbers out of pure caprice in each single case.
>
> It may be that the regularity of large-scale bodies can only be explained if we assume there are laws of individual behavior after all which we have not yet discovered.

Russell is partly right and partly wrong. Yes, there are laws governing the single atom. It is not lawless, it does not flit about randomly; chance is not ultimate. No, these laws are not discoverable; they are in the domain of "the secret things that belong to the Lord God" (Deut. 29:29). "Even if a wise man claims he knows, he cannot really comprehend it" (Eccl. 8:17).

In the analytic way of thinking, the essence of a thing is to be found in the smallest components of which it is made. Thus in Western intellectual history, as thinkers turned *from* God as the final explanation of the universe, they turned *to* dissecting matter to find the key to the structure and origin of the universe. "Since the Renaissance," writes Koestler, "the Ultimate Cause has gradually shifted from the heavens to the atomic nucleus, from the superhuman to the subhuman level."

Nancy Pearcey appropriately remarks,

> With the rise of quantum mechanics, that "ultimate Cause" dissolved into chance. *Science Digest* puts it graphically: "The common sense world of cause and effect is built upon the sands of a subatomic realm in which every individual particle, like the electron and proton, acts entirely capriciously!" (*Bible-Science Newsletter,* January 1985)

Is it any wonder that evolution dogma rests so heavily on *chance?* Naturalism must subscribe to random, capricious, "fortuitous" chance. It really has nowhere else to turn, for the idea of law signifies a Lawgiver, which in turn suggests a supernatural dimension to reality Perish the thought!

Physics used to be known as an exact science. Quantum mechanics has destroyed that notion Physicists are more willing today to admit that science does not discover final absolute truth, a lesson biologists, geologists, astronomers and all scientists need to learn. In the words of Bronowski:

> But what physics has now done is to show that there is only method to knowledge. There is no absolute knowledge. And those who claim it, whether they are scientists or dogmatists, open the door to tragedy All information is imperfect. We have to treat it with humility. That is the human condition; and that is what quantum physics says. I mean that literally. (*The Ascent of Man,* p. 353)

Sheldon Vanauken in his book *A Severe Mercy* provides this interesting insight:

> And another Anglican, Shirley Rosser, in physics at the college, was no less firm in the faith The fact that he, like Peter and Lew at Oxford, was a physicist and a Christian led me to formulate a theory as to why so many physicists — I knew of still others — were committed Christians The theory went like this: The non-scientists say, well, we don't know the answers, but the scientists do; and the scientists who are not physicists say, well, we don't know the answers either, but the physicists do, and the physicists know that they do not, in fact, have the ultimate answers and, accordingly, turn to Christ who does. (p. 129)

Sir James Jeans has observed:

> The old physics showed us a universe which looked more like a prison than a dwelling place. The new physics shows us a universe which looks as though it might conceivably form a suitable dwelling place for freemen, and not a mere shelter for brutes (quoted in *Bible-Science Newsletter,* January 1985)

The inerrant Word of God speaks plainly to these beautiful remarks:

> For this is what the Lord says —
> he who created the heavens
> he is God;
> he who fashioned and made the earth,
> he founded it;
> he did not create it to be empty,
> but formed it to be inhabited. (Isaiah 45:18)

Before we leave this subject, we should note that Einstein's theory of relativity denied Newton's concepts of absolute time and space. This idea was seen as support for relativism — the rejection of all absolute or universal standards of Biblical truth and morality. Very recent developments suggest that Einstein may have been wrong after all in rejecting absolute space. Newtonian science included the idea of an ether permeating the entire universe. The ether provided the ultimate frame of reference for all motion, the absolute and immovable space. The Michelson-Morley experiment is cited in every physics book as proof that there is no such phenomenon as ether. As a result, scientists concluded there is no physical basis for absolute space or motion; Einstein was right! However, a new physical basis for an absolute reference frame has now been found. It is the 3°K cosmic microwave radiation which is distributed uniformly through space. At the 1984 meeting of the American Association for the Advancement of Science, Pacific Division, Robert Gentry discussed this new evidence, and suggested that this new finding "essentially falsifies the fundamental postulates of the theory of relativity." Dr. Thomas Barnes in his book, *Physics of the Future*, cites Martin Harwit, author of *Astrophysical Concepts:* "It is interesting that the presence of such a radiation field should allow us an absolute rest frame" (*Bible-Science Newsletter*, January 1985).

Thus, in the debate between evolution-supported moral relativism and the absolute moral dictates of the Bible, even here the Bible stands tall. No matter from what angle the creation versus evolution debate is viewed — morality, absolute knowledge, supernaturalism, the laws of thermodynamics, the fossil record, determinism, age of the earth, natural selection, chance, etc. — the evolutionary presupposition comes up short, the Biblical teaching rings true.

Thomas Molnar

(continued from page 8)

[6] Ibid., p. 52

[7] Ibid., p. 56

[8] Ibid., p. 57.

[9] Ibid., p. 85-86.

[10] Marilyn Ferguson, a prominent spokeswoman of the contemporary, neopagan "new age" movement, speaks in glowing terms of the next step of mankind's evolution as analogous to a Kenyan flattid-bug colony in which all flattid-bugs act in total unison to produce a "hive" looking like a flower. *The Aquarian Conspiracy*, pp. 161-162.

On Faith and Reason

Walter R. Schumm

From a technical standpoint, there is no reason to involve religion in the creation/evolution controversy. However, I think it is likely that unless a scientist has a philosophical ground for challenging the most popular viewpoint (or at least what is *perceived* as most popular by many), one would not waste one's time and energy investigating other alternatives. Herein the creationist is vulnerable to the accusation that his interest in creationism stems from his religious views and therefore his acceptance of creationism is a consequence of faith rather than intellectual understanding I would like to present an anecdotal piece of evidence that shows that faith may be an important prerequisite to understanding within science, even in areas unrelated to religion. When I was an undergraduate student at the College of William and Mary in Williamsburg, Virginia, I happened to be a physics major, albeit not a particularly distinguished student — definitely in the bottom half of my class of ten or eleven seniors However, my brother had come across a discovery by the Interprobe Company, which was using electrostatic cooling to insure that metal alloy coatings would cool uniformly with fewer fractures due to uneven cooling Basically, the company's founding engineer had discovered that when a high voltage (10,000+ volts) was applied to a needle, a very smooth current of air emanated from the tip of the needle, a flow much more even than could be obtained with a rotating fan or other device. For my senior project, I decided to explore what might be causing this phenomenon. Even though I had faith in my brother's honesty and had advertisements from the Interprobe company about their process, my professors did not believe the claims They debated the idea hotly over their lunches and were unable to arrive at a consensus about how the phenomenon might be working, if indeed it worked at all! Many felt it was a bad idea to let a rather poor student work on such a risky project, fearing what would happen if it failed, as they expected

Finally, the apparatus was assembled — the power supply, the voltage transformer, the macrame needle, and a red hot heating coil about two inches from the tip of the needle. The switch was flipped and indeed the coil turned black near the needle as it cooled down! No longer was the fact a matter of faith — it worked. Now what amazed me at the time was that one of the professors upon seeing it work was able to explain how it worked after only five minutes of reasoning. In other words, once faith was present, once there was a reason to believe it worked, it took almost no time to understand the process, even though it had been a matter of hot debate beforehand. Essentially, as the needle got smaller near the tip the effective voltage was magnified to a point where a flow of ions or electrons was created from the high voltages, which then propelled those particles away from the needle in a smooth flow that moved the other non-ionized air molecules along with it.

Before seeing it work, my professors could *not understand* how the process could work; after *seeing* it work, it required almost no thought to do so. That change in the difficulty of intellectual understanding, I would propose, is

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relevant to all science and is a characteristic of human nature rather than a phenomenon peculiar to controversies between religion and science Opponents of creationism who say that creationists believe what they do only because their faith demands it are sadly mistaken, because a lack of faith in any theory is probably sufficient to hinder anyone's understanding of it. From a scholarly perspective, one would need the flexibility to consider a variety of theories as potentially valid and to evaluate their strengths and weaknesses in the light rather than *a priori* assuming *one* alternative to be the *only* credible theory.

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Book Review

continued from p. 32

Johnson is a staunch defender of the free market economy as alone conducive to liberty, maximum social welfare and material improvement. Commenting on the "war socialism" during World War I, he writes: "In all the belligerents, and not just in Russia, the climactic year 1917 demonstrated that private liberty and private property tended to stand or fall together." (p.17) He points out that "America won [World War II] essentially by harnessing capitalist methods to the unlimited production of firepower and mechanical manpower. (p 402) The five Pacific economies (Japan, Hong Kong, Taiwan, Singapore and South Korea) which showed the greatest economic gains after World War II did so despite their lack of natural resources and burgeoning populations. They succeeded due to their adoption of free market economies. (pp.720-723) Johnson also shows the falsity of the "population explosion" myth and contrasts it with true demographic facts (see especially pp.716-718).

The book presents many little-known facts unearthed by thorough research. The role of German military and economic support of Leninism was far greater than imagined by most students of the period Germany did bear full responsibility for the outbreak of World War I, as proven by the great German historian Fritz Fischer's 1961 book *Griff nach der Weltmacht* (Grasp for World Power; published under the inadequate title *Germany's aims in the First World War* in London 1967). Hitler's full programme for world rule was much more far-reaching and all-encompassing than commonly realized (see p.343 for the astonishing details). The most important treasures of virtually new information are in the chapters about China before and after World War II, about the crop of posturing, greedy and totalitarian dictators afflicting the poor "third world" nations "liberated" from European colonial rule after World War II, and the persons (such as the pro-Naxi Mufti of Jerusalem) and circumstances leading to the present Mid-East crisis.

Modern Times is a rich and fascinating as well as authoritative reference work on world history since the advent of moral and political relativism following Einstein, Lenin and Hitler. Indispensable to a well-rounded picture of our age, and to any genuine student of history, from high school through retirement

— Reviewed by Ellen Myers

Creation and Time

Ellen Myers

The prerogative of God over time is the first of the attributes of His absolute sovereignty and power revealed to us in the Bible. "In the beginning God created the heavens and the earth." From the beginning each and every creature was spoken into existence by His Word in the day and in the sequence He appointed for it during the first six days of creation week (Genesis 1).

The Word of God was Jesus Christ, "with God" and "God." "All things were made by him, and without him was not any thing made that was made" (John 1:1-3) to our own day. The Word as perfect Son acted in perfect unity with the Father, which means that He acted neither before nor after the exact time appointed — the *speaking* — by the Father. Christ acknowledged the Father's primacy in determining time when He told His apostles just before ascending to heaven that "it is not for you to know the times or the seasons, which the Father has put in his own power" (Acts 1:7). Here He merely repeated what He had told them earlier when they had asked Him about the signs of His coming again, and of the end of the world: "But of that day and hour knoweth no man, no, not the angels of heaven, neither the Son, but the Father" (Matthew 24:36, Mark 13:32).

The relationship between the Father and the Son in time truly and totally reflects their Father-Son relation within the absolutely transcendent, eternal, non-temporal trinitarian Godhead. The Father sets times, seasons, days and hours; the Son fulfills them as it were "simultaneously", the Holy Spirit broods over, sanctifies and witnesses of their decree and work. With regard to their operation in time, Christ Himself confirms the Father's primacy as well as His perfect oneness with the Father: "The Son can do nothing of himself, but what he seeth the Father do: for what things so-ever he doeth, these also doeth the Son likewise" (John 5:19a). "I proceeded forth and came from God: neither came I of myself, but he sent me" (John 8:42). "I must work the works of him that sent me, while it is day: the night cometh, when no man can work" (John 9:4). Thus our Lord Jesus Christ says both "I and my Father are one" (John 10.30) as well as "My Father is greater than I" (John 14.28b). Both statements are true of Him as the eternal Son of His eternal Father, "very God of very God" (Nicene Creed), and of Him as the Second Adam and perfect Son of Man, entering created time as "that holy thing" conceived by the Holy Spirit in Mary the virgin (Luke 1:35). For He "is the image of the invisible God, the firstborn of every creature" (Col. 1:15).

It is and ought to be obvious that "the beginning" of creation spoken of in Genesis 1.1 is the beginning" in and of the eternal godhead Himself. Pantheistic continuity between Him and the creation in any and all forms is excluded. He created all things out of nothing. He is absolutely transcendent. While His creation exists in time, He does not; with Him "there is no variableness, neither shadow of turning." For God

> has no history. He is too completely and utterly real to have one. For, of course, to have a history means losing part of your reality (because it had

> already slipped away into the past) and not yet having another part (because it is still in the future) . . . God forbid we should think God was like that.[1]

As everything else, so time is the Father of light's "good and perfect gift from above" to *us* (James 1:17). Our knowledge is hence also of necessity creaturely; it must work in time by accumulating information moment by moment. God is not so restricted because He, the Creator, is qualitatively different *as Creator* from the creatures. All things, which we must reckon chronologically as tied to past, present, or future (by definition unknown to us), are equally known and present to Him: "Known unto God are all his works from the beginning of the world" (Acts 15:28). David exclaims in awe in Psalm 139: "All the days ordained for me were written in your book before one of them came to be" (v.16, NIV). C.S. Lewis puts it like this:

> Our life comes to us moment by moment. One moment disappears before the next comes along: and there is room for very little in each. That is what Time is like . . . We tend to assume that the whole universe and God Himself are always moving on from past to future just as we do . . .
>
> But God, I believe, does not live in a time-series at all. His life is not dribbled out moment by moment like ours: with Him it is, so to speak, still 1920 and already 1960. For His life is Himself. . . .
>
> God is outside and above the Time-line . . . what we call "tomorrow" is visible to Him in just the same way as what we call "today." All the days are "Now" for Him.[2]

Because God lives in His transcendent, eternal Creator's Now, and because He determines all times entering our created time-lines, our time comes to us moment by moment from "in front of us" from His hands. What C.S. Lewis did not fully and plainly spell out is yet implicit in his words, " our life comes *to* us moment by moment " Time comes to us *from the future,* then meets us in the present as we call each new moment "now," and then is literally "past," passed on behind us as it were.

This is no novel teaching. St. Augustine already explained in his *City of God* that the movements "which are the basis of time, do pass from future to past."[3] The Christian scholar and philosopher Boethius (fifth century A.D.) spoke of God's eternal Now in which He does not so much "foresee" as "see" all things. The modern Christian author Nathan R Wood explains this true direction of the time-line from future to past clearly and undeniably:

> Never does yesterday turn back in its flight and become to-day, or to-day become to-morrow Never does the past pass into the present, or the present into the future No. It is the other way To-morrow becomes to-day. To-day becomes yesterday. The future becomes the present. The present becomes the past . . . The present is the narrow strait, is the living instant, it is the flashing reality, through which the vast oncoming future flows into the endless receding past.[4]

Of course, the past is not "endless," but rather has its absolute end in the first moment of creation in time. With God, it is not "past" but eternally present, as we have seen. Even Christian scholars in our post-Darwinist century may have slips of the tongue, conceding their "endless," that is really "beginning-less' past to evolutionists.

A leading Christian scholar of our own generation, R.J. Rushdoony, repeatedly emphasizes this correct biblical view of time as history proceeding from future to past, or rather, from God's creative decree to creation, so that

> history is determined by eternity, and 'the eternal does not exist for us as a principle but as a person, and that as an absolute person' . . . The very meaning and glory of history is its derivative nature . . . under God.[5]

Likewise, C.S. Lewis's teacher and master George MacDonald (1824-1905) often spoke of the "sacred Present." He knew that

> The next hour, the next moment, is as much beyond our grasp and as much in God's care, as that a hundred years away . . . in neither can we do anything, in both God is doing everything . . . the moment which coincides with work to be done, is the moment to be minded, the next is nowhere till God has made it.[6]

As we saw, our Creator determines, or sets or appoints, the times of our lives. The word "time" itself first occurs in the Bible in Genesis 18, where God announces to Abraham, "I will certainly return unto thee according to the time of life; and lo, Sarah thy wife shall have a son" (v.10). When aged Sarah surreptitiously laughs in unbelief, He repeats, "At the time appointed I will return unto thee, according to the time of life, and Sarah shall have a son" (v.14). Genesis 21:2 records the fulfillment: "For Sarah conceived, and bare Abraham a son in his old age, at the set time of which God had spoken to him."

One of the most striking Bible passages on this matter is Acts 17:24-31:

> God that made the world and all things therein, seeing that he is Lord of heaven and earth, dwells not in temples made with hands; neither is worshipped with men's hands, as though he needed anything, seeing he gives to all life, and breath, and all things;
>
> And has made of one blood all nations of men for to dwell on all the face of the earth, and has determined the times before appointed, and the bounds of their habitation;
>
> That they should seek the Lord, if haply they might feel after him, and find him, though he be not far from every one of us. for in him we live, and move, and have our being; as certain of your own poets have said, For we are also his offspring.
>
> Forasmuch then as we are the offspring of God, we ought not to think that the godhead is like gold, or silver, or stone, graven by art and man's device.
>
> And the times of this ignorance God winked at; but now commands all men everywhere to repent: because he has appointed a day, in which he will judge the world in righteousness by that man whom he has ordained; whereof he has given assurance to all men in that he has raised him from the dead.

According to this marvelous testimony of the apostle Paul to the Greeks of Athens and indeed "to all men everywhere," all the time-lines of each and every human being from conception to death, of all nations, and indeed of all creatures, are initiated, held, extended and interwoven by the Creator according to His temporal and eternal purpose. See also Romans 8:19-23 on the redemption of all creation "into the glorious liberty of the children of God" (v.21), and Revelation 4:11b: "Thou hast created all things, and for thy pleasure they are and were created." The sovereignty of our God as Creator of all things, specially of time, out of nothing guarantees that there is no such things as an "accident" in time catching Him by surprise. Not a sparrow falls from the roof without the knowledge of our God, and He has numbered the very hairs of our heads (Matthew 10:29-30).

Not only the complete time-line but also its regularly recurring divisions were expressly initiated by God during creation week, on the fourth day: "And God said, Let there be lights in the firmament of the heaven to divide the day from the night, and let them be for signs, and for seasons, and for days, and years" (Genesis 1:14). The pagan peoples of antiquity dimly understood this divine purpose. This is evident from their sometimes highly advanced astronomical calculations by which they regulated their agriculture, guided their travels, and set their religious feast days. Being partakers of Adam's sin and fall, they descended to idolatrous worship of the heavenly lights, especially the sun. However, the very names they gave the constellations have been strikingly interpreted as signs showing that the whole Gospel of Christ may be read in the stars.[7]

On the other hand, God's people clearly saw "times and seasons" as part of their Creator's command to exercise dominion over His handiwork under the heavens: "To every thing there is a season, and a time to every purpose under the heaven" (Eccles. 3:1-8, 17b). A man made wise by the Creator's law "discerneth both time and judgment," yet no man can foresee or determine his future (Eccles 8:5-7). In the days of vigorous youth, of feeble old age, and of contemplating death, God and His eternal decree alone have and give meaning to man's life (Eccles. 12). Part of the believer's stewardship under the Creator is to "redeem the time," especially as a witness to unbelievers (Ephes. 5:16, Col. 4:5). Finally, the universally accepted time period of the week with its six days of labor and one of rest, has its origin in God's mode of creation (Genesis 2:1-3). Unbelievers may offer their tentative explanations in humanistic anthropologies and philosophies for the origin and meaning of time, seasons and even subjective duration, but only biblical creation by the personal and absolutely transcendent, sovereign Creator can consistently account for time.

God in His mercy may even now as it were "wink at" our unbelief for a while. Nevertheless the life of each of us is His appointed day, His "now" for us, in which we must obey His command to repent and believe in Him through His Son Jesus Christ so we may be approved in that appointed final day, Christ's judgment (Acts 17:31). Sadly, multitudes disregard his gracious visitation in time. When Jesus approached Jerusalem near the end of His ministry of earth, He wept over it, saying:

> If thou hadst known, even thou, at least in this thy day, the things which belong unto thy peace! but now are they hidden from thine eyes. For the days shall come upon thee, that thine enemies . . . shall lay thee even with the ground, and thy children within thee; and they shall not leave in thee one stone upon another; because thou knewest not the time of thy visitation (Luke 19:41-44)

It is certainly true from the biblical creation perspective that God eternally sees, or, from our creaturely reckoning of time, foresees and determines all His visitations in time; "eternal reality is not waiting for a future in which to be real" as "the doctrine of Predestination . . . shows (truly enough)."[8] But while God determines time, he does not bend or twist the wills of men to obey or deny

Him in time. God's eternal "Now" and our time-series of successive "now's" correlate, not abstractly, but in a living way determined by our God, the God of the living; for "all live unto Him" (Luke 20:38b). This is what must have been in the mind and heart of C.S. Lewis when he wrote: "Ye *cannot* know eternal reality by a definition. Time itself, and all acts and events that fill Time, are the definition, and it must be lived."[9] In particular our righteous God is not the author of sin, as the Westminster Confession of Faith sets forth clearly and beautifully:

> God from all eternity did by the most wise and holy counsel of his own will freely and unchangeably ordain whatsoever comes to pass: yet so as thereby neither is God the author of sin, nor is violence offered to the will of creatures, nor is the liberty or contingency of second causes taken away, but rather established.[10]

In conclusion, the future is "already now" present to God in His transcendent, absolute Present or "Now." For us, being His creatures, it is like all God's mercies are "new every morning" (Lam.3:23). How near we are thus truly and temporally to our Lord, the Giver of time, in each moment as it comes fresh from the fountain of His eternal "Now" to us in our "now" in time! Our time has a firm, certain and living foundation in our God in Three Persons, our Creator, It comes to us "head-on" from Himself, so each moment is literally an "ad-venture," a "coming-to" or "at" us. (Some languages still reflect the true meaning of "future" as "coming-to," for example the French "avenir" or the German "Zukunft.") Children and childlike hearts know that each new day "is the day which the LORD hath made; we will rejoice and be glad in it" (Psalm 118:24). How much more urgent His call sounds in this biblical light upon time: "Wherefore (as the Holy Ghost saith), To-day if you will hear his voice, harden not your hearts" (Hebrews 3:7-8, 15: Psalm 95:7b-8). "Behold, now is the accepted time; behold, now is the day of salvation" (II Cor. 6:2). All this is so due to God Himself and to His creation.

NOTES

[1] C.S. Lewis, *Mere Christianity* (New York: Macmillan Paperback Edition, Nineteenth Printing 1975), p.148.

[2] Ibid., pp. 146, 147, 148.

[3] Quoted in Rousas John Rushdoony, *The One and the Many* (Fairfax, VA: Thoburn Press, 1978), p.145.

[4] Ibid.

[5] Rousas John Rushdoony, *The Biblical Philosophy of History* (Phillipsburg, NJ: Presbyterian and Reformed Publishing Co., 1979), pp.16, 17.

[6] C.S. Lewis, *George MacDonald, An Anthology* (Garden City, NY: Doubleday & Company, Inc. Dolphin Books, 1962), pp. 58, 59.

[7] Cf. Joseph A. Seiss, *The Gospel in the Stars* (Grand Rapids, MI: Kregel Publications, 1972, 1982).

[8] C.S. Lewis, *The Great Divorce* (New York: Macmillan, Sixteenth Printing 1970), p. 129.

[9] Ibid.

[10] Chapter III, 1, quoted in Rushdoony, *The Biblical Philosophy of History*, p. 17.

Book Review

Paul Johnson, **Modern Times.** Harper & Row, Publishers, First Harper Colophon edition, New York 1985. 817 pp. incl. Source Notes and Index. Pb., $9.95.

This concise yet comprehensive history of world events from the 1920s to the 80s is written from the classical Christian perspective. Its motto is Psalm 2:9-10: "Thou shalt break them with a rod of iron; thou shalt dash them in pieces like a potter's vessel. Be wise now therefore, O ye kings: be instructed, ye judges of the earth." (frontispiece) Its theme is the inevitable defeat of relativistic amorality by the absolute law and wisdom of God, especially in the areas of government and economics.

While the creation/evolution issue is not a major feature of the book, Johnson points out that "Darwin's notion of the survival of the fittest was a key element both in the Marxist concept of class warfare and of the racial philosophies which shaped Hitlerism. Indeed the political and social consequences of Darwinian ideas have yet to work themselves out, as we shall see throughout this book" (p. 5). Johnson recognized that William Jennings Bryan, who "fought a desperate rearguard action against Darwinian evolution in the 1925 Scopes trial" was "misrepresented or completely ignored in the 'Eastern press'." "The hate-figure of the East Coast highbrows in the Twenties," Bryan demanded that evolution "be taught as theory not fact, parents and taxpayers should have a say in what went on in the schools, and teachers should abide by the law of the land." He "saw himself as resisting the aggressive dictatorship of a self-appointed scholastic elite who were claiming a monopoly of authentic knowledge" (p. 208). The modern creation movement after the 1960s is not covered, perhaps because its impact upon international politics, the chief topic of the book as a whole, was as yet non-existent (the beliefs and presidency of Ronald Reagan, an avowed biblical creationist, are not covered either).

One of the book's central themes is the thesis that "there are no inevitabilities in history" (p. 43). Johnson is not a historical determinist. For example, when citing David Ben-Gurion's claim that "History had decreed that we should return to our country and re-establish the Jewish state," he does not hesitate to comment: "But this was to speak with the voice of Lenin or Hitler. There is no such person as History. It is human beings who decree" (p. 484). The Bible-believing Christian cannot unreservedly agree with either position. True, "history" is not a person. Yet "history" is the record of the ultimate decree of the Creator Who "put down the mighty from their seats, and exalted them of low degree" (Luke 1:52). No man "could have any power at all except it were given him from above" (Christ's words to Pilate, John 19:11). However, God's sovereign rule in the affairs of men — in history — is not *mechanical.* A Hezekiah may be granted an extra fifteen years of life (2 Kings 20); a repentant Nineveh may be spared from destruction (the book of Jonah). An Ahab, with all his cunning and strength, may be killed as it were "by chance" (1 Kings 22:34), but that "chance," so often a factor in crucial historical developments, is in truth of the Lord.

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